



## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/RU2003/000333	International filing date ( <i>day/month/year</i> ) 25 July 2003 (25.07.2003)	Priority date ( <i>day/month/year</i> )
International Patent Classification (IPC) or national classification and IPC G09B 9/08		
Applicant	BARANOV, Nikolai Alekseevich	

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 3 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of \_\_\_\_\_ sheets.

3. This report contains indications relating to the following items:

- I  Basis of the report
- II  Priority
- III  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

Date of submission of the demand 24 February 2005 (24.02.2005)	Date of completion of this report 25 August 2005 (25.08.2005)
Name and mailing address of the IPEA/RU	Authorized officer
Faxsimile No.	Telephone No.

**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

International application No.

PCT/RU2003/000333

**I. Basis of the report**

1. With regard to the elements of the international application:\*

the international application as originally filed  
 the description:

pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

the claims:

pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, as amended (together with any statement under Article 19)  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

the drawings:

pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

the sequence listing part of the description:

pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).  
 the language of publication of the international application (under Rule 48.3(b)).  
 the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

contained in the international application in written form.  
 filed together with the international application in computer readable form.  
 furnished subsequently to this Authority in written form.  
 furnished subsequently to this Authority in computer readable form.  
 The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  
 The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4.  The amendments have resulted in the cancellation of:

the description, pages \_\_\_\_\_  
 the claims, Nos. \_\_\_\_\_  
 the drawings, sheets/fig. \_\_\_\_\_

5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-16	YES
	Claims		NO
Inventive step (IS)	Claims	1-16	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-16	YES
	Claims		NO

2. Citations and explanations

This report makes reference to the following documents cited in the search report:

D1: RU 2087037 C1

D2: US 5724040 A

D3: US 5009598 A

Documents D1-D3 disclose various systems for flight control or flight control training, including for flight in conditions of dangerous turbulence.

The prior art closest to the system according to claim 1 is the flight simulator known from D1, which comprises a computer system with program modules for carrying out training scenarios, objective monitoring of the student and objective monitoring of the instructor, an integrated instructor working space, a group of integrated student working spaces, a device for flight information input, and a database of training scenarios.

The claimed simulator differs from that known from D1 in that it contains a module for monitoring and controlling the training regime, a module for training scenario databases, a module for switching among training

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modules, a module for simulating visual conditions outside the cabin, the visual portion of the airspace and the Earth's surface in real time, a module for simulating the pilot working space, a module for simulating the piloting and navigation instrument panel with indicators for the operating conditions of the aircraft engines, a module for simulating elements for controlling the aircraft units and systems, a module for simulating environment parameters, a module for simulating turbulent conditions, a module for simulating the effect of turbulence on the aircraft, a module for simulating aircraft dynamics, and a system for evaluating pilot actions.

Documents D2 and D3 do not disclose the above features. Said features make it possible to teach aircraft piloting techniques under turbulent conditions and to train techniques for executing aircraft avoidance maneuvers in order to avoid dangerous trailing vortex wakes from vortex generators, and said features are not obvious. Consequently, the invention according to independent claim 1 and dependent claims 2-16 meets the requirements for novelty and inventive step.